

Preventing Type 2 Diabetes

Small Steps Yield Big Rewards

Bob Huber doesn't dwell on the time, about 10 years ago, when he found out he was likely to get **type 2 diabetes**. At 5'11", he weighed 216 pounds, rarely exercised and had little energy.

"In a sitting position, I had a hard time taking a deep breath," he recalls.

Then, at a health fair in Washington, DC, he happened by a booth where he had a screening test for blood **glucose**. It came back high. More testing confirmed he had a



Definitions

Diabetes

A disease in which the body has problems producing or using insulin, a hormone needed to convert sugar, starches and other food into energy. In time, diabetes can lead to serious problems including heart disease, blindness, kidney failure and nerve damage.

Glucose

A type of sugar. When the glucose level in your blood gets too high, it can damage your tissues and organs.

Prediabetes

A condition in which your blood glucose level is higher than normal but not high enough for a diagnosis of diabetes. People with prediabetes are at increased risk for developing type 2 diabetes and for heart disease and stroke.

Type 2 Diabetes

Formerly called adult-onset diabetes, this is the most common form of diabetes. People can develop it at any age. Being overweight and inactive increase the chances of developing type 2 diabetes.



condition called **prediabetes**.

Prediabetes causes no symptoms, but it is still a serious condition. Many people with prediabetes develop type 2 diabetes within the next 10 years. People with prediabetes also have a 50% higher risk of having a heart attack and stroke than those who have normal blood glucose levels.

Huber, along with more than 3,000 other adults with prediabetes, decided to volunteer for the Diabetes Prevention Program (DPP), an NIH-funded study taking place at 27 clinical centers around the country.

The study found that overweight people with prediabetes can often prevent or delay diabetes by losing 5 to 7% of their body weight. They can

do this through cutting fat and calories and increasing physical activity, such as walking 30 minutes a day 5 days a week. The modest weight loss from diet and increased physical activity lowered diabetes onset by nearly 60 percent in study participants. Treatment with metformin,

an oral diabetes medication, lowered the risk of developing diabetes by 31 percent in the study.

Lifestyle changes worked just as well for men and women and all ethnic groups. Nearly half the DPP

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participants were from minority groups who suffer disproportionately from type 2 diabetes: African Americans, Hispanic Americans, American Indians, and Asian Americans and Pacific Islanders. In the study, people age 60 and older who made the lifestyle changes lowered their chances of developing diabetes by 71 percent.

When these results were announced, they surpassed even researchers' expectations. Study chair Dr. David Nathan of Massachusetts General Hospital said, "They came as close to qualifying for 'the gold' as any diabetes finding of the last decade."

Diabetes is the sixth leading cause of death in the United States. Statistics just released by the Centers for Disease Control and Prevention show that 20.8 million people—7% of the population—have diabetes, and over 6 million of them don't even know they have it. Another 41 million people have prediabetes.

Bob Huber was 65 years old when he learned he had prediabetes. He's 75 now and feels better than ever. After losing 20 pounds and keeping it off, he credits his energy to the healthy habits he learned as a DPP participant. But you don't have to be a study participant to adopt these healthy habits. As Huber's story shows, the power to control this condition is in your hands. ■

**National Diabetes Education Program:**

www.ndep.nih.gov

National Diabetes Information Clearinghouse:

diabetes.niddk.nih.gov

**Wise Choices****Small Steps to Diabetes Prevention**

Recent studies have proven that people at high risk for type 2 diabetes can often prevent or delay the onset of diabetes with 30 minutes of physical activity 5 days a week and by losing 5 to 7% of their body weight. In other words, you don't have to knock yourself out to prevent diabetes. The key is: small steps lead to big rewards. Here are some tips that might help.

EASY STEPS to increase activity:

- Put away the TV remote control and get up to change the channel.
- Try walking around the house while you talk on the phone.
- Park the car farther away from stores, movie theaters or your office.
- Get off the bus one stop early, if you are in a safe place to walk.
- Visit museums, the zoo or an aquarium. These are great ways to be active with your family.

EAT RIGHT. Try some of these tips to get started:

- You don't have to cut out the foods you love to eat. Just cut down on the amount you eat, and eat them less often.
- Try to keep meat, poultry and fish servings down to three ounces—that's about the size of a deck of cards.
- Try to eat three sensible meals at regular times throughout the day.
- Eat more fresh fruit, veggies, nuts and whole grains.
- Limit fried foods. Baking and broiling are healthier ways to eat meat, chicken and fish.
- When eating out, share large portions.

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**Statistics****About Diabetes**

- About 20.8 million people in the United States have diabetes.
- Type 2 diabetes, by far the most common form, is closely linked to obesity and is increasing in all age and ethnic groups in the United States.
- Prediabetes, a condition that often leads to type 2 diabetes, affects 40% of Americans ages 40 to 74, or 41 million people.

Diabetes: Equal Opportunity Disease?

Confronting Diabetes in High-Risk Populations

Some populations have higher rates of **diabetes**. African Americans, Hispanic Americans, American Indians, Asian Americans and Pacific Islanders develop **type 2 diabetes** more often than white Americans. But obesity and physical inactivity may be greater risk factors than a person's **genes**.

Diabetes is a disease in which the body has problems producing or using insulin, a hormone needed to convert sugar, starches and other food into energy. For people living a Western lifestyle—with low physical activity levels and a high-fat, high-sugar, low-fiber diet—a family history of type 2 diabetes is one of the strongest risk factors for getting the disease. But people living in non-Westernized areas appear to get less type 2 diabetes regardless of their genetic risk.

"We know that there are genetic factors involved, but it's clear that lifestyle, food habits and the amount of physical activity play very impor-

tant roles in the development of type 2 diabetes," Dr. Saul Malozowski of NIH's National Institute of Diabetes and Digestive and Kidney Diseases explained.

Among Asian Americans and Pacific Islanders, for example, traditional plant- and fish-based diets are being replaced with more animal protein, animal fats and processed carbohydrates. This could be a reason why diabetes is a growing problem among those populations in the United States. People who are inactive and eat a diet high in fat and low in fruits and vegetables are at higher risk for developing type 2 diabetes.

"Being overweight and sedentary is an unhealthy combination," said Dr. James Gavin, III, past chair of the National Diabetes Education Program



and clinical professor of medicine at Emory University's School of Medicine. "It becomes even more risky when you add a genetic susceptibility to type 2 diabetes."

A crucial fact revealed by diabetes research is that, whatever your ethnic background, if you are at high risk for developing diabetes, you can still lower your chance of getting it by losing a modest amount of weight, lowering the fat and calories in your diet, and increasing your physical activity to 30 minutes a day, 5 days a week. ■



www.ndep.nih.gov/diabetes/prev/prevention.htm



Wise Choices

Are You at Risk for Diabetes and Prediabetes?

If you are 45 or older, especially if you're overweight, talk to your health care provider about testing for diabetes and prediabetes. If you're under 45, ask about your risk for prediabetes or diabetes and whether you should get tested if:

- You have a parent, brother or sister with diabetes.
- You're overweight.
- Your family background is African American, Hispanic/Latino, American Indian, Asian American or Pacific Islander.
- You've had diabetes while pregnant or gave birth to a baby weighing 9 pounds or more.
- You've been told that your blood glucose or cholesterol (lipid) levels are not normal.
- Your blood pressure is 140/90 or higher or have been told that you have high blood pressure.
- You're fairly inactive, doing physical activity less than 3 times a week.



Definitions

Genes

Stretches of DNA, a substance you inherit from your parents, that define characteristics you inherit like height and eye color. They also affect how likely you are to get certain diseases like diabetes.

Type 2 Diabetes

See the definitions for diabetes and type 2 diabetes on the first page of this issue.

Health Capsules

Preparing for Your Doctor Visit

You get ready for a date. You prepare for meetings and presentations at work. But most people don't think to prepare for visits to the doctor. If you're one of them, you're missing out on an important way to help ensure you get the best possible health care.

"I don't think any of us prepare for our medical visits, and I think that's a big mistake," Dr. Margarita Alegria, di-

rector of the Harvard-affiliated Center for Multicultural Mental Health Research at Cambridge Health Alliance, said at a recent talk at NIH. Alegria investigates disparities in mental health care services among people from different populations.

Research like Alegria's may lead to solutions to health disparities, but in the meantime, researchers do know that no matter what ethnic background you have, one key to getting good health care is good communication between you and your health professionals. That's something you can do something about right now.

The first step in good communication is finding a doctor you feel comfortable talking with. Talking about your health means sharing information about how you feel, both physically and emotionally. Having a good relationship with your main, or primary, doctor is one of the best ways to ensure your good health. This doctor knows you and your particular health history. He or she can

help you make medical decisions that suit your values and can guide you toward other medical specialists and health care providers you may need.

A basic plan for your visit can also help. Before going to the doctor, make a list of the things you want to discuss. Think about how you're going to describe your symptoms. Put your questions in order so you're sure to ask about the most important ones first.

During your visit, make sure you understand what the medical tests you are getting are for. When a doctor makes a diagnosis, make sure you understand your condition and fully discuss your treatment options.

If you're not comfortable or unable to do these things yourself, consider bringing a family member or friend and let them know in advance what you want from your visit. Make sure you play your part to get the best health care possible. ■



Talking to Your Doctor:
www.nei.nih.gov/health/talktodoc.asp

**Talking With Your Doctor:
A Guide for Older People:**
www.niapublications.org/pubs/talking/index.asp, or
1-800-222-2225

Conversando con su Médico:
www.niapublications.org/pubs/conversando/index.asp, or 1-800-222-2225

Good Protection: Get a Flu Shot

Each winter, millions of people suffer from the fever, aches and pains caused by the flu, a highly contagious infection. A relatively mild disease in healthy young and middle-aged people, flu can be life threatening to older adults. In an average year, flu leads to more than 200,000 hospitalizations and about 36,000 deaths nationwide.

One of the best ways to prevent flu is to get a flu shot each fall. Getting the shot every year is important because the flu virus is slightly different each year. The best time to get the shot is in the autumn, before flu season begins.

Even though the shot is effective and covered by Medicare, most older Hispanics don't get a yearly flu shot. According to the Centers for Disease

Control and Prevention, only about 48% of Hispanics get the vaccine compared to 69% of non-Hispanic whites. Many worry about safety, but in most people, the flu shot doesn't cause any side effects. A few have some soreness or redness on the arm where the shot is given.

NIH's National Institute on Aging (NIA) is offering a free fact sheet in Spanish about the flu and how to prevent flu for yourself and your loved ones. Call 1-800-222-2225 weekdays between 8:30 a.m. and 5:00 p.m. Eastern time to order *Que Hacer Acerca de la Gripe*. A Spanish-speaking information specialist is available to respond to calls. This and other Spanish publications on healthy aging also are available on the NIA website at www.niapublications.org. ■



www.niaid.nih.gov/factsheets/flu.htm



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